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Campbell, G., & Turner, J. D. (2011). Substitutes for legal protection: corporate governance and dividends in Victorian Britain. *Economic History Review*, *64*(2), 571-597. https://doi.org/10.1111/j.1468-0289.2010.00545.x

Published in:
Economic History Review

Document Version:
Peer reviewed version

Queen's University Belfast - Research Portal:
Link to publication record in Queen's University Belfast Research Portal

*Substitutes for legal protection: corporate governance and dividends in Victorian Britain**

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Abstract

Companies in Victorian Britain operated in a laissez-faire legal environment from the perspective of outside investors, implying that such investors were not protected by the legal system. This paper seeks to identify the alternative mechanisms which outside shareholders used to protect themselves by examining the dividend policy and governance of over 800 publicly-traded companies at the beginning of the 1880s. We assess the importance of these mechanisms by estimating their impact on Tobin's Q. Our evidence suggests that dividends and well-structured and incentivised boards of directors may have played a role in protecting the interests of outside investors.

Published

Campbell, G & Turner, JD (2011), 'Substitutes for legal protection: corporate governance and dividends in Victorian Britain' *Economic History Review*, vol 64, no. 2, pp. 571-597., 10.1111/j.1468-0289.2010.00545.x (http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0289.2010.00545.x/abstract)

* Thanks to the librarians at London's Guildhall Library for access to the Burdett collection of company accounts and the Yale IMM project for access to the *Investors' Monthly Manual*. Thanks to Brian Cheffins, Leslie Hannah, Aldo Musacchio, Larry Neal and Robert Wright for their comments.

1. Introduction

The British capital market underwent a great transformation in the nineteenth century in terms of the number and value of equity securities.[1] The liberalisation of incorporation law and the establishment of regional stock exchanges removed supply constraints, whilst the increasing wealth and financial sophistication of the middle classes simultaneously increased the demand for publicly-traded equity. The rapid growth in the number of companies issuing such equity raises the question as to how outside investors were assured that they would receive a return on their investment as well as their initial capital back.[2] Recent academic studies have suggested that the legal system plays an important role in determining the level of protection enjoyed by outside shareholders.[3] However, in the Victorian era, British company law and common-law principles were *laissez-faire* in this regard.[4] How such shareholders protected themselves in this era against expropriation by corporate insiders (i.e. managers) is the subject under investigation in this article.

In this article, using data on over 800 companies, we examine whether dividends were an important means of protecting outside investors in Victorian capital markets. Dividends can be viewed as a substitute for legal protection as paying out substantial proportions of earnings prevents managers diverting cash flows and may submit them to

[1] In terms of the growth in the number and value of equity securities in the nineteenth century see Acheson et al, 'Rule Britannia' and Grossman, 'New indices'. According to Michie, *London Stock Exchange*, p.89, the nominal value of company securities (apart from railways) quoted in the Stock Exchange Official List as a proportion of the total nominal value of listed securities was 5.5 per cent in 1853, 7.4 per cent in 1883, and 19.8 per cent by 1903.

[2] "Outside investors" in contrast to "insiders" are investors who are not directly involved in the governance of the firm. They are also referred to in the literature as minority shareholders or investors.

[3] La Porta *et al.* 'Legal determinants', 'Law and finance', 'Corporate ownership', 'Agency problems', 'Investor protection'.

[4] Cheffins, 'History', 'Does law matter?'; Cottrell, *Industrial finance*, chap. 3; Kennedy, *Industrial structure*, p.126.

the discipline of the capital markets.[5] We also examine corporate governance mechanisms which may have played a role in protecting shareholders. The effectiveness of dividends and these various governance mechanisms in protecting outside shareholders is tested by analysing their impact on corporate value as measured by Tobin's Q.

Our regression results suggest that dividends and well-structured and incentivised boards may have played a role in protecting shareholders. In addition, there is some evidence to suggest that informal trust mechanisms (as measured by the proximity of investors to the company) played some role in protecting shareholders of locally-based companies. On the other hand, shareholder voting mechanisms don't appear to have protected shareholders.

The findings of this article may have some bearing on the long-running debate on the role of the capital markets in the alleged failure of the Victorian economy.[6] The general claim is that there was a bias towards either foreign or safe securities. Although investors have been largely absolved of blame, there is a view that financial infrastructure was in someway defective.[7] In particular, the permissive nature of company law vis-à-vis shareholders has been highlighted as a major cause of the bias towards safe securities.[8] This article contributes to this debate by suggesting that investors may have been able to protect themselves in this laissez-faire legal environment.

Although this article focuses on Victorian capital markets, it has a broader significance for contemporary debates within financial economics. Firstly, the results of this article suggest, contrary to the work of contemporary 'law and finance' scholars, that

[5] Cheffins, 'Dividends as a substitute'.
[6] See McCloskey, 'Did Victorian Britain fail?'
[7] Edelstein, *Overseas investment*; Kennedy, *Industrial structure*. See Michie, "Finance of innovation" for a strong rebuttal of the view that the capital markets failed British industry.
[8] Cottrell, *Industrial finance*, p.54; Crafts, 'Long-run growth', p.17; Kennedy, *Industrial structure*, p.127.

dividends may be a substitute for weak investor protection.[9] Secondly, this article highlights the positive influence which relatively large and incentivised boards can have as well as the negative impact of independent directors who are selected because of their social standing rather than their expertise.

This article is organised as follows. The next section examines the legal and extra-legal protection afforded Victorian investors. The third section analyses the prevalence of different corporate governance mechanisms in our sample as well as the dividend policies of our sample firms. The fourth section answers the question as to whether different means of protection were effective by examining their impact on Tobin's Q. The final section is a brief conclusion.

2. Legal and extralegal protection for outside investors

The gradual liberalisation of British incorporation law, commencing in the mid-1820s with the repeal of the infamous Bubble Act[10] and the enactment of the Banking Copartnership Act[11], and continuing with the Companies Act of 1844[12] and the 1855 Limited Liability Act[13], resulted in a myriad of Acts governing the incorporation of and regulating the behaviour of companies. As a consequence, the 1862 Companies Act,[14] was passed to consolidate these (and other) existing pieces of legislation. Apart from the railway companies, the vast majority of publicly-traded companies in the last quarter of

[9] See La Porta *et al*., 'Agency problems'.
[10] 6 Geo. IV, c.91.
[11] 7 Geo. IV, c.46. This Act only permitted note-issuing banks to form on a joint-stock basis provided they were located outside a sixty-five mile radius of London. Remaining subsequent legal doubts with regard to the establishment of non-issuing joint-stock banks within this radius were eliminated with the passage of the Bank of England Privileges Act, 1833 (3 & 4 Will. 4, c.98).
[12] 7 & 8 Vict., c.110. This Act liberalized incorporation law by permitting firms to incorporate without explicit State permission.
[13] 18 & 19 Vict., c.113. This Act was repealed, but re-enacted in 1856 (19 & 20 Vict., c.47).
[14] 25 & 26 Vict. c.89.

the nineteenth century came under the purview of this Act. Railways and some utility companies, which had their own Acts of Parliament or Royal Charters granting them incorporation status, generally came under the purview of the Companies Clauses Consolidation Act (1845), which provided a standardized deed of settlement for companies created by special Acts of Parliament.[15]

Shareholder protection was dealt with in a section of the 1862 Companies Act entitled "Provisions for Protection of Members". This section of the Act required companies registered under the Act to hold an annual general meeting.[16] It also empowered shareholders to appoint inspectors from the Board of Trade to investigate the books and affairs of the company. However, it may have been very costly for outside shareholders to call for this appointment as shareholders having at least one-fifth of total capital had to make the application. Consequently, as a contemporary legal scholar noted, this is "a very useful provision for the benefit and protection of shareholders, but one seldom taken advantage of".[17] Nevertheless, the existence of such a provision may have placed a lower limit on the expropriation activities of insiders.

The 1862 Act didn't impose a compulsory audit upon firms.[18] The absence of rigorous disclosure requirements had the alleged effect of making uninvited takeovers impossible, which "merely served to heighten minority shareholders' sense of ignorance

[15] 8 & 9 Vict. c.16. See Cooke, *Corporation*, p.141 on this Act.
[16] Companies Act 1862 (25 & 26 Vict. c.89)
[17] Emden, *Shareholders' legal guide*, p.121.
[18] Banks which had registered under the 1879 Companies Act (42 & 43 Vict. c.76) in order to convert from unlimited to limited liability were subject to a compulsory audit. See Emden, *Shareholders' legal guide*, p.101; Watts and Zimmerman, 'Agency problems', p.628. Although the London Stock Exchange may have required a compulsory audit for new listings from the 1860s, it wasn't until 1902 that companies listing on the London Stock Exchange had to have provisions in their articles to distribute their annual balance sheet to shareholders (Cheffins, *Corporate ownership and control*, p.95). As to why many companies in our sample published their accounts whenever they were not required to, Cheffins, *Corporate ownership and control*, p.95 suggests that it was in a company's self-interest to disclose information periodically to investors as an absence of such information would lead shareholders to exit the company.

and helplessness".[19] In addition, rights viewed by modern scholars as playing an important role in protecting minority shareholders were absent[20]: (a) insider trading was legal; (b) proxy voting was not mandated; (c) minority shareholders had no legal rights of acquiring board interest; (d) minority shareholders had no rights to force the company to purchase shares when they disagreed with fundamental management decisions; (e) the issuance of shares with unequal voting rights was not regulated; (f) shareholders did not have a pre-emptive legal right to buy new issues of stock; (g) the percentage of share capital required to call a meeting was not mandated.[21]

Although the 1862 Companies Act didn't mandate the above provisions, it did provide a list of default provisions for company constitutions in Table A of the Act. These provisions included: (a) proxy voting was permitted at shareholder meetings; (b) extraordinary general meetings could be called by not less than one fifth of shareholders; (c) shareholders had a pre-emptive right to purchase new issues; (d) an annual audit of company accounts.[22] Companies could take or leave any or all of the provisions in Table A; and the extent to which provisions in Table A were adopted by companies is unknown, but it appears that the majority of companies didn't just completely adopt the default provisions of Table A. For example, only 30.1 per cent of companies formed after 1862 in our sample (see below) have graduated voting scales, which was the default provision in Table A.

The Companies Clauses Consolidation Act (1845), similar to the 1862 Companies Act, required companies to hold annual meetings, but unlike the 1862 Act it mandated

[19] Kennedy, *Industrial structure*, pp.126-7.
[20] La Porta *et al.* 'Law and finance', pp.1126-8.
[21] See Chadwyck-Healey, *Treatise* and Emden, *Shareholders' legal guide*. See also Cheffins, 'Does law matter?', pp.468-72.
[22] Companies Act 1862 (25 & 26 Vict. c.89), Table A, s. 27, 32, 48, 83.

proxy voting. In addition, it required (without specifying to what extent) that directors must be shareholders and that companies are subject to a compulsory audit. Section 75 of the Act stated that companies are free to have their own voting scales, but offered a default graduated voting scale of one vote for every share up to 10, one vote for every five shares up to 100, and one vote for every ten shares above 100.

As well as weak protection afforded by legislative law, common-law judges in Victorian Britain were generally reluctant to interfere in internal business affairs in order to protect the interests of outside shareholders apart from cases where fraud was involved.[23] In fact the judiciary was, if anything, unsympathetic towards the idea of protecting outside shareholders as was demonstrated in the famous 1843 case of *Foss vs. Harbottle*.[24] The judge in this case ruled that (a) where a director wrongs a company, the proper plaintiff is the company itself, not an individual shareholder, and (b) when a wrong is ratified by a majority of shareholders, an individual shareholder does not have a *locus standi* to proceed with an action against the company.

The absence of strong legal protection in Victorian Britain is perhaps not surprising given that the legislature believed that laissez-faire theory and the practice of partnerships taught that capitalists could look after themselves.[25] The ultimate effect, however, of this weak investor protection was to place "the company's directors in virtually unchallengeable and unchecked possession of the company's assets."[26]

Although corporate law provided little protection for outside shareholders, extralegal protection may have been provided by the organised securities markets. For

[23] See Emden, *Shareholders' legal guide*, pp. 77-80.
[24] *Foss vs Harbottle* (1843) 2 Hare 461 (Chancery Division) Wigram V-C.
[25] Jefferys, *Business organisation*, p.394.
[26] Kennedy, *Industrial structure*, p.126.

example, the London Stock Exchange from the 1850s imposed a two-thirds rule, which required that two-thirds of ordinary stock had to be in the hands of the public if a company wanted a full listing.[27] Although this rule may have constrained market manipulation, it appears to have been easily circumvented.[28] In addition, from about the late 1870s, companies listing on the London Stock Exchange were required to have in their articles a prohibition on directors using company funds to buy the company's own stock.[29] Apart from these rules, the self-regulated stock exchanges simply performed a screening function for initial public offerings in order to protect investors from fraudulent company promotions by requiring firms going public to disclose all material facts which may have affected the value of the company.[30] Therefore neither parliamentary acts, common law judgements, nor the requirements of the stock exchange provided much protection to minority shareholders, which raises an important question: how did outside investors protect themselves in such an environment?[31]

3. Corporate governance and dividends

In order to address the issue of how investors protected themselves, we use governance data from *Burdett's Official Intelligence* (*BOI*), financial data from the *Investors' Monthly Manual* (*IMM*), and accounting data from *The Bankers' Magazine*, *The Economist*, and *Bradshaw's Railway Manual* as well as Burdett's collection of annual

[27] For the rules of the London Stock Exchange at this time see Chadwyck-Healey, *Treatise*, p.671.
[28] Cheffins, *Corporate ownership and control*, pp.225-30.
[29] Chadwyck-Healey, *Treatise*, p.671.
[30] Michie, *London Stock Exchange*, chap. 2.
[31] One possibility, which we control for in our regression analysis, is that the competitiveness of product markets in Victorian Britain prevented insiders from wasting resources as such behaviour would result in the firm being out-competed by its rivals (see Crafts, 'Long-run growth', p.17 and Hannah, *Corporate economy*, p.13). However, competition on its own cannot completely eliminate costly insider diversion of resources (Hart, 'Market mechanism', Jensen, 'Agency costs', p.323).

reports held at the Guildhall Library.[32] Appendix Table 1 defines our variables and gives the data sources for each variable.

1883 is our sample year for several reasons. Firstly, we wanted to examine the corporate governance of companies before the movement to reform company law, the need of which was highlighted by the *Royal Commission on the Depression of Trade and Industry* in the mid-1880s, which could have affected judge-made law.[33] For example, the House of Lords in the 1887 case of *Trevor vs. Whitworth* ruled that a limited liability company could not buy its own shares, preventing directors from manipulating their stock prices using share repurchases.[34] Secondly, we wanted to ensure that our sample included many of the new firms which had issued publicly-traded equity since the 1862 Companies Act. Thirdly, we wanted to examine the governance of companies before the London Stock Exchange instituted major changes in its microstructure, resulting in stricter listing requirements by the turn of the century.[35] Finally, Burdett's collection of annual reports at the Guildhall Library is only available from 1881 onwards, and the *BOI* is only available from 1882.

As we are solely interested in the corporate governance of British firms, we ignore companies classified as foreign by *BOI* i.e. foreign railways and mines. We define the remaining companies in *BOI* as being British if their registered head office as

[32] These reports are bound by industry and are available on request from the Guildhall Library, Printed Books Section, Aldermanbury, London.
[33] Notably, the seminal study of Jefferys regards the mid-1880s as a major watershed in the development of the public company. See Jefferys, *Business organisation*, p.144.
[34] Trevor vs. Whitworth 12 App Cos. 409. The extent to which repurchases occurred prior to Trevor and Whitworth is unknown. A listing on the London Stock Exchange required that articles of association restrain directors from using company funds to repurchase shares. However, this only applied to companies which listed after the late 1870s. Other listed companies had the ability to repurchase their own shares. For example, bank deeds authorised directors to repurchase shares using bank funds, and there is evidence that they availed of this provision (Acheson and Turner, 'Secondary market', pp.146-8).
[35] Davis et al, 'Listing requirements'.

reported in *BOI* was located in Britain or Ireland and their ordinary stock was chiefly traded in Britain or Ireland as reported in the *IMM*. There were 823 British companies with publicly-traded ordinary (or common) stock, which were reported in both the *IMM* and *BOI* in 1883.[36] Using the industry classification scheme of *BOI*, the three largest sectors in our sample are banks (157), industrial and commercial firms (123) and insurance companies (103).

3.1 Concentrated ownership

Ownership concentration data is not readily available for companies in the Victorian era.[37] Nevertheless, we know that some publicly-traded companies in late Victorian Britain had diffuse ownership. In particular, banks and railways, the two largest sectors in the equity market, did not typically have concentrated ownership due either to their size (in the case of railways and large London banks) or restrictions on the proportion of shares which one individual could own (in the case of many banks).[38]

It has been commonly believed that the commercial and industrial publicly-traded companies in Victorian Britain may have been different from railways, banks and other sectors in that they had concentrated ownership, even well into the twentieth century.[39] Hannah has recently questioned this standard view by suggesting that London's listing requirement of a two-thirds free float resulted in at least two-thirds of stock ending up in

[36] Unfortunately, partial information and data was reported for some firms. In particular, there were no voting rules reported for just over 100 companies.
[37] Cheffins, *Corporate ownership and control*, p.157.
[38] See Cheffins, *Corporate ownership and control*, pp.158-9 for railways and Acheson and Turner, 'Secondary market', pp.142-5 for banks. Several insurance companies also had such restrictions on ownership. See Hannah, 'Divorce of ownership', pp.413-4.
[39] Chandler, *Scale and scope*, p.242; Cheffins, 'History', 'Does law matter?'.

the hands of outside owners, which led to a separation of ownership from control.[40] In response, Cheffins has argued that the two-thirds rule only applied to companies listed on the London market and was easily circumvented by others.[41] Cheffins also notes that David Chadwick's firm, which helped organise public offerings in the 1860s and 70s encouraged vendors to retain a sizeable stake in the floated company.[42] From the perspective of the outside shareholder perspective, the structure of ownership may not necessarily matter.[43] Although concentrated ownership may provide stronger incentives to monitor management and restrain the diversion of corporate resources, it may not be unambiguously good for outside shareholders as large owners can use their power to abuse minority interests.[44] Nevertheless, in case ownership structure does matter, we analyse the two industries which had diffuse ownership (banks and railways) separately in our econometric work.

Although we may not know much about ownership concentration, we do know that many companies had extensive shareholder constituencies. For example, even by the mid-1850s, the average shareholder constituency for the ten largest railways was 7,700.[45] The 112 British banks reported in the 1880 *Banking Almanac* had on average 661.9 shareholders, with 15 having more than 1,000 shareholders, and four having in excess of 3,000 owners.[46] Shareholder constituencies exceeding 1,000 were typical in the following sectors: docks, gas, water, telegraph and shipping.[47] The insurance companies

[40] Hannah, 'Divorce of ownership'.
[41] Cheffins, *Corporate ownership and control*, pp.225-30.
[42] Cheffins, *Corporate ownership and control*, pp.169-70.
[43] Demsetz and Lehn, 'Structure of corporate ownership'.
[44] Jensen and Meckling, 'Theory of the firm'; Shleifer and Vishny, 'Large shareholders'; La Porta *et al.* 'Corporate ownership', p.474; McConnell and Servaes, "Additional evidence".
[45] Cheffins, *Corporate ownership and control*, p.158.
[46] The median number of shareholders is 353, and the standard deviation is 827.
[47] Jefferys, *Business organisation*, pp.408-9.

in our sample, which were reported in a Parliamentary return in 1879, had on average 342 shareholder, with three having 1,000 plus shareholders.[48] From various issues of the *Return of Joint Stock Companies*, we were able to locate shareholder numbers for ninety of our sample companies, which had formed between 1878 and 1883. The average number of shareholders is 371.6, with 23 companies having more than 500 shareholders.[49] The size of these shareholder constituencies indicates that even if companies did have large blockholders, there were many small outside shareholders investing in these companies who required assurance that they would receive a return on their investment.

3.2 Locally-based shareholder constituency

Berle and Means have suggested that in this era investors were able to protect themselves and hence did not need legal protection because

> "the corporation was small enough so that he could maintain direct contact with responsible individuals; and thus, either because of his individual influence, or his knowledge of the affairs of the corporation, and community sentiment in general, the law needed to worry little about him."[50]

On the other hand, they suggest that the size and geographical spread of large corporations raised the cost to shareholders of monitoring managers.[51] Commenting on the Victorian situation, J. B. Jefferys suggests that

> "the control exercised by the shareholders was mainly of a personal character, and

[48] *Return Relating to Joint Stock Banking and Other Companies*, (P.P. 1879).
[49] The median number of shareholders is 337.5, and the standard deviation is 249.1. *Return of Joint Stock Companies*, (P.P. 1878-1880, 1880-81, 1881, 1882). As the *Return of Joint Stock Companies* simply reports on newly-formed companies, these shareholder numbers greatly underestimate the actual number of shareholders as not all shares were issued before the return was filed.
[50] Berle and Means, 'Corporations', p.56.
[51] Berle and Means, 'Corporations', p.58. Even modern investors have a local bias – see Ivković and Weisbenner, "Local bias".

> the security of the investor lay in his knowledge of the men whom he had elected to the Board of Management and the financial and personal interest these latter had in the concern."[52]

Many nineteenth-century British companies originated as local concerns with local investors.[53] However, as can be seen from Table 1, only 35 per cent of companies based outside London in 1883 had their headquarters in the same city as the chief market on which their stock was traded.[54] As shareholder lists lengthened and as more firms conducted business in areas remote from their shareholder base, shareholders effectively handed control over to directors, and investment became impersonal.[55] Nevertheless, some firms did continue to have their stocks traded on local exchanges, which may have resulted in better-informed shareholders than nationally-traded firms.[56] Informal trust relationships in such companies may have acted as a partial substitute for formal investor protection.[57] Consequently, we conjecture that the presence of informal trust mechanisms, which may be more prevalent if a company was traded locally, may have offered some protection to Victorian shareholders.

The watchfulness exercised by shareholders was supposedly reinforced by uncalled capital, whereby shareholders were liable for more than the amount they had paid-up in the company's shares. According to Jefferys, uncalled capital was firstly an "incentive to interest in the activities of the company", and secondly, it made transferring shares extremely difficult, thus keeping the composition of shareholders and their interest

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[52] Jefferys, *Business organisation*, pp.409-10.
[53] Anderson and Cottrell, 'Victorian capital market"; Broadbridge, 'Railway share capital'; Newton, 'Towards financial integration'; Reed, 'Railways', *Investment in railways*.
[54] Given the size of London and the tendency of companies to locate there, companies with headquarters in London and shares traded on the London market are omitted from this measure. 365 companies had head offices in London and had their stock traded on the London market.
[55] Jefferys, *Business organisation*, p.386-7; 409.
[56] See Hannah, 'Pioneering', p.24.
[57] Other studies have emphasised the importance of such mechanisms in financial systems – see, for example, Lamoreaux, 'Banks'; Franks *et al*, 'Ownership'; Guiso *et al*, 'Trusting'.

in the company stable.[58] However, there is no correlation in the whole sample between the levels of uncalled capital and whether or not shares traded locally, suggesting that uncalled capital did not necessarily reinforce the desire for local control.[59]

INSERT TABLE 1

3.3 Shareholding voting rules

Law and finance scholars suggest that one-share-one-vote rules better protect outside shareholders as under this system insiders cannot have substantial control without having substantial cash flow rights.[60] However, an older tradition, recently highlighted by Dunlavy, argues that "democratic" voting mechanisms (i.e. one-shareholder-one-vote) may be more effective at constraining large insiders.[61] She suggests that British corporations in the Victorian era sought to constrain the power of insiders by using graduated and capped voting scales.[62] However, there are two potential problems with the view that voting rights matter for control that lead us to hypothesise that voting mechanisms were not an important means of protecting outside investors in Victorian Britain. First, shareholder voice is only effective if shareholders can costlessly monitor managerial behaviour. Second, shareholder voice suffers from a free-rider problem whereby investors under-invest in monitoring and in exercising their voice. If investors don't like the decisions of managers, a potentially less costly way of expressing their views or dissent is to exit by selling the company's stock.[63] This may explain the rapid

[58] Jefferys, *Business organisation*, p.174.
[59] The correlation coefficient is 0.0369 and is not significant at the five per cent level.
[60] La Porta *et al.*, 'Law and finance', pp.1126-7.
[61] Dunlavy, 'Corporate Governance'.
[62] Dunlavy, 'Corporate Governance', p.30. See Hilt, 'Corporate Governance' for evidence from the United States supporting this view.
[63] Easterbrook and Fischel, 'Voting', p.396.

decline in attendance at AGMs as well as the desire of Victorian investors for greater stock marketability.[64]

As *BOI* reports the voting rules and scales of each company, we can measure whether or not voting systems were weighted towards outside shareholders.[65] Admittedly, it is likely that most votes at general meetings were initially conducted by a show of hands to gauge whether or not a proposal had clear support. However, if there was no clear majority and if the chairman or a group of shareholder demanded a poll, the voting schemes were applied.

From Table 2 we can see that just less than a quarter of our sample had voting rights which placed a cap on the number of votes which any one shareholder could exercise, and graduated voting scales were employed by about 43 per cent of companies. On the other hand, about 48 per cent of companies had no caps on voting and didn't have a graduated voting scheme.

In Table 3 we see that older (and larger) firms were more likely to have voting rules which were weighted towards outside shareholders. Although 431 of the companies in our voting-rights sample formed after 1862, only 67 (including 17 banks) of them had upper limits or caps on the number of votes any one shareholder could cast, whereas 91 of the 262 firms formed before 1862 had voting caps. This suggests that over time, company constitutions were increasingly less likely to weight voting schemes in favour of outside shareholders. However, as discussed above, we do not believe that this ultimately mattered.

INSERT TABLES 2 and 3

[64] See Jefferys, *Business organisation*, pp.396, 409.
[65] Unfortunately the voting systems of some companies were not reported in *BOI*.

3.4 Boards of directors

Boards of directors are usually viewed as endogenously determined institutions designed to ameliorate the ability of insiders to expropriate outside shareholders.[66] They can also be viewed as delegated monitors of management who construct optimal managerial incentive contracts.[67] Obviously, for boards to be credible, they need to have independent directors who act on behalf of shareholders by keeping executive directors in check. One judge commenting on the rise of independent directors in Victorian Britain suggested that they reassured outside investors of the worth of the firm.[68] However, during the Victorian era, there was a common perception that public companies often selected independent directors for their social position rather than their business experience – hence they were given the appellation 'ornamental' directors.[69] Such directors were regarded "either too incompetent or too pre-occupied to become useful members of the board", and were viewed as being "more frequently incumbrances than aids."[70]

In order to get a measure of the prevalence of independent directors who were appointed because of their social position (the so-called 'ornamental' directors), we count the number of directors from the ruling class (i.e. MPs and aristocrats) on boards. As can be seen from Table 4, the average number of ruling-class directors was 0.79, with an average of 9.57 per cent of board members coming from the ruling class.[71] As we can see from Table 5, company age and the presence of ruling-class directors are positively correlated, suggesting that such directors were more prevalent in the established

[66] Hermalin and Weisbach, 'Boards of directors', p.9.
[67] Hart, 'Corporate governance', p.681.
[68] Kennedy, *Industrial structure*, p.126.
[69] Chandler, *Scale and scope*, p.242.
[70] Chadwyck-Healey, *Treatise*, p.134.
[71] Of the 794 sample companies, 478 did not have a ruling-class director in 1883.

companies. Notably, there is a negative correlation between the presence of ruling class directors and locally-traded stock, which could be evidence supporting the view that shareholders in locally-traded companies can more easily influence board structure so that 'ornamental' directors were not appointed. Alternatively, such directors may have been appointed to non-regionally-based companies as a means of assuring investors.

A mechanism which may align the interests of directors and shareholders is to require directors to own stock in the company before they take up their directorship. In the Victorian era such a requirement was often included in a company's constitution.[72] Indeed, Victorian investors were frequently given the advice to "watch your directors", and this practically meant keeping a check on who the directors were, particularly the managing directors, and how much of the stock they owned.[73]

Of the 791 companies for which we have board data, 654 placed share qualifications upon their directors. As can be observed from Table 4, the average share qualification for a director and boards is 0.39 per cent and 2.53 per cent of a company's par value respectively.[74] As can be observed from Table 5, age and size are negatively correlated with the share qualifications of directors, suggesting that older and larger firms have lower share ownership qualifications. However, it is more likely that director qualifications for older firms may simply have not kept pace with increases in capital. As can be seen from Table 6, the size of qualifications varies substantially across industries.

[72] Chadwyck-Healey, *Treatise*, p.134; Emden, *Shareholders' legal guide*, p.8.
[73] Bartlett, *Investors Directory*, pp.74-5; Jefferys, *Business organisation*, pp.402-3. Nevertheless, there was a general suspicion that some directors were given their qualifications without paying for them. See *S. C. Report on the Companies Acts of 1862 and 1867* (P.P. 1877), QQ. 697-708, 2481-84. Such practices, if they occurred, would have weakened the alignment of interests between directors and shareholders.
[74] Campaigners for company law reform argued that the directors should be required to own a substantial amount of their company's stock – anything from 10 to 20 per cent. See *S. C. Report on the Companies Acts of 1862 and 1867* (P.P. 1877), QQ. 1437-40; Jefferys, *Business organisation*, p.430.

Although directorial ownership qualifications may have been small relative to the size of the company, they would still have represented a substantial proportion of a director's personal wealth. The median director in our sample had to hold at least £1,000 (at market value) of their company's stock in 1883.[75] Given Lindert's and Rubenstein's wealth estimates of the titled and mercantile classes for this period, this stake would have a substantial proportion of an individual director's wealth, thus incentivising them to ensure that their company was well run.[76] We therefore hypothesize that directorial qualifications played a positive role in protecting outside shareholders.

INSERT TABLES 4, 5 & 6

Founders or deferred shares were shares held by directors (who were usually the founders of the company) which received no dividend until a pre-established dividend had been paid to ordinary shareholders, and sometimes they gave the holders a right to a high share of profits once the pre-established dividend had been met.[77] Only 14 of our sample companies had such shares, and all but one of these were under three years of age.[78] Given the highly incentivised nature of these shares, we hypothesise that they played some role in protecting shareholders.

The size of the board may also have been a factor in its effectiveness. As can be seen from Table 4, the average size of boards in 1883 was 7.55. Unsurprisingly, as we can see in Table 5, the size of boards is positively correlated with size and age, a finding that is reiterated in Table 6. A Victorian company law expert suggested that "it is not

[75] The average was £2,097. In terms of par value, the median director held £500.
[76] Lindert, 'Unequal English wealth', p.1137 estimates that the average titled and mercantile man had estates in 1875 of approximately £9,800 and £11,804 respectively. Rubenstein, 'Victorian middle classes' suggests that prior to 1879, very few men had estates valued at more than £250,000
[77] Thanks to a referee for bringing these shares to our attention.
[78] We found 17 additional companies in the Commercial and Industrial section of *BOI* which had such shares, but these young companies are not in our sample as they were not reported in the *IMM*.

generally desirable to have a large board"[79], possibly because large boards could result in director free-riding, with boards simply becoming window dressing.[80] However, large boards of directors can also be viewed as a commitment device to investors as multiple directors can partially constrain executive directors by making collusion amongst them more costly. Directors can also engage in mutual monitoring of one another.[81] More importantly, however, given the existence of directorial share qualifications, larger boards imply that there are more individuals with substantial proportions of their wealth dependent upon their company's performance. We therefore hypothesize that larger boards may have provided better protection for investors.

INSERT TABLE 6

3.5 Dividends

Dividends potentially played an important signalling role for investors in an era with little publicly-available information on companies.[82] As such, dividends were intrinsic to the valuation of shares, and if investors were unhappy with dividend payouts, share prices would be adjusted downwards to reflect this.[83] Consequently, one would also expect investors to favour stable dividends, resulting in companies smoothing profits over the business cycle. Given that directors were typically required to own company stock and, as was established above, these stakes were a sizeable proportion of the median director's asset portfolio, directors would have had a large incentive to ensure that their company paid high and stable dividends. The payment of high dividends implies that cash flows

[79] Chadwyck-Healey, *Treatise*, p.134.
[80] See Yermack, 'Higher market' for modern-day evidence which supports this view. However, a recent study by Coles *et al*, 'Boards' suggests that large boards are not necessarily a bad thing.
[81] Hermalin and Weisbach, 'Boards of directors', p.10.
[82] Baskin and Miranti, *History of corporate finance*, p.19; Cheffins, *Corporate ownership and control*, pp.108-15.
[83] Cheffins, *Corporate ownership and control*, p.112.

can't be diverted by insiders for personal use or invested in negative net-present-value projects which benefit insiders.[84] In addition, by paying dividends, managers may have to go more frequently to the capital markets to raise funds, and are therefore subject to the discipline of the market if it is discovered that they have engaged in opportunism.[85]

Dividends can thus be viewed as a substitute for legal protection.[86] In other words, if outside investors aren't adequately protected by the legal system, insiders will pay higher dividends to maintain their reputation with investors and the capital market. We calculate two dividend measures for our sample. First, we use the dividend / par ratio which is reported in the *IMM* – this measures the level of dividend paid out as a percentage of a stock's paid-up value. We obtained the dividend / par ratio for 1883 and for every year in the previous decade or for as long as the company had been in existence if it was less than 10 years old.[87] Second, we use a variable which calculates the percentage of distributable profits paid out as a dividend. However, due to data availability, we were only able to calculate this measure for 424 companies in 1883.

From Table 7, we observe that the dividend / par ratio was relatively high and that the coefficient of variation of the dividend / par ratio was low for most industries, suggesting that investors had a preference for high and stable dividends. Indeed, in this era the dividend paid was the chief concern of shareholders, and remained so well into the twentieth century.[88] The average and median dividend payout ratio for the overall

[84] Jensen, 'Agency cost'; Faccio *et al*., 'Dividends'.
[85] Easterbrook, 'Two agency cost'.
[86] Cheffins, 'Dividends as a substitute'. See La Porta *et al*, 'Agency problems' who argue that dividends are an outcome of good investor protection rather than a substitute for it.
[87] The 1884 edition of the *IMM* was checked in case dividends paid in 1883 were reported in 1884 instead of 1883.
[88] Jefferys, *Business organisation*, p.409; Cheffins, 'History', p.100.

sample are high, suggesting that companies typically did not have much free cash flow.[89] Notably, the dividend payout ratio is highest for banks and railways, two of the largest and longest-established sectors on the equity market.

INSERT TABLE 7

As can be seen from Table 7, in terms of dividend / par ratio, the financial sector has the highest ratio, which could be explained by the fact that such institutions may not have needed to retain earnings due to the nature of their business. Alternatively, as the opaque nature of assets in this sector may have increased the ability of managers to engage in opportunism, high dividend payments could be viewed as a commitment mechanism to outside shareholders.

The regression results in Table 8 indicate that larger firms had a higher dividend payout ratio, which is unsurprising as such companies are more likely to be mature entities with large cash flows and few investment opportunities. Interestingly, our *growth* variable suggests that a firm's investment opportunities don't appear to have affected its dividend payout decision. The coefficient on the age variable supports this finding in that company age doesn't appear to affect the dividend payout ratio.

INSERT TABLE 8

4. Corporate governance, dividends, and corporate value

The key question for us is whether any of the above hypothesised means of protecting outside investors were effective. One possibility would be to see whether or not these various mechanisms matter for firm market values. The usual method of measuring firm

[89] Hart, *Studies in profit*, I, p.121 finds that the mean ratio of dividends and interest to total income for British manufacturing companies in the period 1920-38 is similar to the payout ratio found in the present study.

market values in corporate-governance studies is to use Tobin's Q.[90] The general idea behind using Tobin's Q in these studies is that it provides some indication as to whether managers are acting in the best interests of outside shareholders.[91] Tobin's Q relates the market value of a firm, which is the expected sum of discounted cash flows that investors expect to receive, to the replacement value of assets. These expected cash flows will be determined by the future performance of the company and the rate of managerial expropriation. We use the *growth* variable in our regressions to control for the potential investment opportunities component of Tobin's Q. Due to data availability, Tobin's Q is available for just over one half of our sample.

Studies of the effect of corporate governance on corporate value typically face two methodological issues. The first issue is that variables could have been omitted from the regression, and these omitted variables could explain the observed correlations. The usual way of dealing with omitted variable bias is to use panel regression with firm fixed or random effects. However, our governance variables change slowly, if they even change at all. Furthermore, as noted above, dividend policy was also unlikely to change in the short-run, thus panel estimation techniques are of little value in this context. The second issue is that endogeneity can be a problem in such studies – do firms with high market values choose certain governance mechanisms or do certain governance mechanisms cause higher market values? Endogeneity may not be a major problem for us for at least two reasons. First, many of our governance variables are decided upon before a firm is actually launched unto the public market. Second, we deal with the

[90] See, for example, Demsetz and Lehn, 'Structure of corporate ownership'; Morck *et al*, 'Management ownership'; McConnell and Servaes, 'Additional evidence'; Demsetz and Villalonga, 'Ownership structure'; Gompers *et al*, 'Corporate governance'; Villalonga and Amit, 'Family ownership'.

[91] Two firms with the same potential cashflow may have a different Tobin's Q if the perceived risk of expropriation is different. *Ceteris paribus*, the lower the rate of expropriation the higher the Tobin's Q.

possibility that high market value may cause firms to pay a higher dividend, by looking at dividend policy in the long-run. In other words, it is highly unlikely that a firm's Tobin's Q in 1883 causes a firm's dividend policy in the previous decade. However, the absence of an appropriate instrumental variable implies that our estimates should be considered as correlations rather than casual effects.

We exclude all outliers from our sample because (a) historical financial and accounting data was prone to typographical errors, (b) accounting data wasn't bounded by standardized accounting conventions, and (c) equity values might be imperfect metrics of firm value due to the absence of publicly-available information on companies. For example, in the case of Tobin's Q, we exclude all companies with a Q greater than three.

Our empirical strategy is to test whether or not dividends and governance variables are correlated with corporate value. We also include some control variables in our regressions such as company age and size, industry binary variables, market power, uncalled capital, profit, and firm growth.[92] There are two caveats which must be placed on the latter two control variables. Firstly, they are based on accounting data, which, as already stated, was not governed by standardized conventions. Secondly, they are not available for all companies, and when they are both included along with governance and other control variables, they greatly reduce the number of observations in our regressions. Consequently, we run our regressions with and without these two control variables.

We have two different measures of dividends – the dividend / par ratio and the dividend payout ratio. Two versions of the dividend / par ratio are used, both of which are trying to capture dividend behaviour in the long-run – one which uses the average of

[92] We ignore the 'reserve liability' which many banks adopted after their conversion from unlimited liability in the early 1880s because it was only callable in the event of bankruptcy, whereas uncalled capital could be called up at any time at the discretion of the directors.

the ratio from 1880 to 1882 and one which uses the average of the ratio from 1873 to 1882. As the dividend payout ratio for banks and railways is available for dates earlier than 1883, we create a variable for these two sectors which is the average of the dividend payout ratio in 1873 and 1883. We also attempt to capture whether dividend stability was something which was valued by outside investors using the coefficient of variation of a company's dividend / par ratio over the previous decade.

INSERT TABLES 9, 10, 11 and 12

As can be seen in Tables 9, 10, 11 and 12, in terms of the governance variables, the *board size* variable is consistently positive across all and statistically significant across most of the specifications, suggesting that larger boards (scaled for firm size) had a positive impact on corporate value. The coefficient on the *directors qualification* variable is mostly significant and always positive in the specifications in Tables 9, 10, 11 and 12, suggesting that the greater the required share ownership of the board, the higher will be the corporate value. The coefficient on the *ruling class directors* variable is consistently negative in all the specifications, but it isn't always statistically significant. This evidence suggests that the presence of these so-called 'ornamental' directors had a negative influence on corporate value.[93] The coefficient on the *founders* variable in Table 9 suggests that the presence of founders or deferred shares has a positive impact on

[93] Braggion, 'Credit market constraints', finds that the presence of titled directors on the boards of new-technology manufacturing companies had a positive impact on firm growth. His basic argument is that having titled directors on the boards of new technology companies provides such companies with a greater access to informal credit. An alternative interpretation is the titled classes were simply diversifying their wealth due to the steep fall in land prices and redistributive legislative interference in landowner / tenant contracts (Thompson, *English landed society*, p.307; Atiyah, *Rise and fall*, p.585). Interestingly, when Braggion looks at established companies as well as the new technology companies, he finds that titled directors have a negative (although not a statistically significant) impact on firm growth.

corporate value, but once we control for firm growth, the coefficient is no longer statistically significant.[94]

As hypothesized, the coefficient on the *cap on votes* variable is never significant, suggesting that voting arrangements which were weighted towards outside shareholders provided little protection.[95] Although not reported in Tables 9-12, we also used a binary variable which equals 1 if the company voting scheme was one-share-one-vote, 0 otherwise. One could view this variable as a proxy for the probability of a takeover as such voting schemes facilitated takeovers.[96] However, we also found this variable to be insignificant, suggesting that the increased potential of a takeover bid did not appear to protect shareholders.

Specifications 10 and 11 in Table 9 include a market power variable, which attempts to capture the absence of product market competition on corporate value. Although only statistically significant in the smaller sample, the coefficient is negative on both occasions, which suggests that the product market competition may have played some role in protecting outside investors from expropriation.

All our various dividend variables in Tables 9, 10, 11 and 12 are positively correlated with corporate value apart from specifications 9, 11 and 13 in Table 9. Of particular note is that the coefficients on the *dividend payout ratio* in Tables 9 and 10 are positive, large and statistically significant, suggesting that firms which pay out substantial

[94] The founders variable is not in Tables 11 and 12 because none of the companies had three or more years of dividend payments.
[95] An alternative binary variable, which was 1 if companies either had a cap on votes and/or graduated voting scales, 0 otherwise, was used in the regression specifications. This variable was also statistically insignificant.
[96] Hannah, 'Divorce of ownership', pp.409-10.

proportions of their earnings have higher corporate values.[97] In addition, the sign on the *dividend coef. of var.* variable is consistently negative and mostly statistically significant across the various specifications, suggesting that a stable dividend payout policy has a positive impact on corporate value. Taking these findings together, it would appear that investors rewarded the payment of high and stable dividends with higher market values, implying they were an important mechanism by which investors assured themselves of a return on their investment.

The coefficient on the *traded locally* variable is positive in most specifications but is statistically significant in about half of the specifications. This evidence suggests that informal trust mechanisms may have provided some protection to shareholders. In order to see if the marginal impact of *board size* or the dividend variables varies with *traded locally*, our proxy for informal trust mechanisms, we add interaction terms to our regression specifications in Tables 9, 11 and 12. The coefficients on the dividend interaction terms suggest that the marginal impact of dividends on corporate performance does not differ much between locally-traded and nationally-traded companies. On the other hand, the coefficient on the *board size* / *traded locally* interaction term suggests that an increase in *board size* has a greater marginal impact on corporate performance for locally-traded companies than nationally-traded ones. This finding may arise because in companies where informal trust mechanisms were important, the more directors which

[97] Although not reported in the tables, whenever we interact our industry dummies with the *dividend payout ratio* variable, we find that the marginal impact on corporate performance of an increase in the dividend payout ratio is smaller for railways, telegraph companies, and land and building companies. When the industry dummies are interacted with *board size*, we find that the marginal impact on corporate performance of an increase in board size is smaller for insurance companies, land mortgage and finance companies, and tea and coffee companies.

were in place, the greater the number of individuals with which shareholders were acquainted.

The above raises the interesting question as to how dividends protected outside shareholders. As share prices in this financial market were largely driven by dividends (in the absence of other publicly-available data) and as directorial share qualifications meant that the median director had a significant proportion of their asset portfolio invested in their company's stock, then it was in the interest of directors to ensure that high dividends were maintained. This would have acted as a check on substantial surreptitious (or otherwise) expropriation by directors.

An alternative explanation as to why dividends protected investors is that paying dividends may have meant that managers had to go more frequently to the capital markets to raise funds, thereby subjecting themselves to the scrutiny and discipline of the market.[98] We are able to test this alternative explanation by regressing *dividends (1883)* (dividend par ratio in 1883) and *dividend payout ratio* on the change in total paid-up value of all securities (ordinary and preference shares as well as debentures) issued over the subsequent decade, which was captured by the variable *new security issue*. As can be seen from Table 13, the coefficient on the *dividend payout ratio* variable is not statistically significant, but the coefficient on the *dividends (1883)* variable is statistically significant, although it is small, as is the explanatory power of this variable. Taken as a whole, this would suggest that there is little evidence to support the idea that firms were submitting themselves to market discipline by having a high dividend payout.

INSERT TABLE 13

[98] Easterbrook, 'Two agency cost'.

5. Conclusion

The evidence presented in this paper suggests that in a laissez-faire legal environment, dividends played an important role in assuring outside shareholders of a return on their investment. Our results also suggest that large boards (relative to firm size) and requirements upon directors to own shares are positively correlated with Tobin's Q. On the other hand, the presence of independent directors from the ruling class, the so-called 'ornamental' directors, are negatively correlated with corporate value. Informal trust mechanisms also may have played a role in protecting investors in companies which issued their stock on local stock exchanges. Notably, voting mechanisms which were weighted towards outside shareholders do not appear to have been valued by them.

The main implication of our findings for the Victorian capital-market failure debate is that high and stable dividend payments and well-structured and incentivised boards may have acted as an effective market substitute for legal protection. In terms of the recent 'law and finance' debate, our findings suggest that dividend payments may well have been a partial substitute for weak investor protection laws in nascent financial markets.

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Table 1. *Companies with stock traded locally (1883)*

Industry	N	Company stock traded on market in same city in which it is headquartered (excluding London)	Company stock traded on market in same city in which it is headquartered (including London)
		%	%
Steamships & Shipbuilding	39	56.41	92.31
Wagon & Railway Carriage	19	52.63	52.63
Spinning & Weaving	8	50.00	50.00
Canals	17	47.06	58.82
Iron, Coal & Steel	44	43.18	56.82
Banks	157	40.13	73.89
Industrial & Commercial	123	39.02	81.30
Land Mortgage & Financial	52	38.46	96.15
Insurance	103	33.98	93.20
Railways	57	33.33	68.42
Land & Building	32	28.13	87.50
Tramway & Omnibus	39	25.64	89.74
Docks	9	22.22	77.78
Gas & Waterworks	67	20.90	71.64
Mines	19	15.79	47.37
Tea & Coffee	17	5.88	100.00
Telegraph	21	4.76	95.24
Total	823	34.99	78.98

Source: see text.

Table 2. *Shareholder voting rights (1883)*

Industry	N	One Vote per Share	One Vote per Multiple Shares	Graduated Voting	Cap on votes	Graduated Voting or Cap on votes
	(%)	(%)	(%)	(%)	(%)	(%)
Banks	139	15.83	25.18	58.99	44.60	64.75
Spinning & Weaving	7	85.71	0.00	14.29	42.86	42.86
Insurance	85	24.71	27.06	48.24	36.47	63.53
Canals	11	45.45	45.45	9.09	36.36	45.45
Docks	9	22.22	11.11	66.67	33.33	77.78
Gas & Waterworks	53	41.51	15.09	43.40	24.53	52.83
Land Mortgage & Financial	48	56.25	22.92	20.83	20.83	37.50
Land & Building	29	65.52	13.79	20.69	20.69	34.48
Tea & Coffee	14	7.14	64.29	28.57	14.29	42.86
Wagon & Railway Carriage	14	14.29	21.43	64.29	14.29	28.57
Telegraph	21	47.62	38.10	14.29	14.29	71.43
Steamships & Shipbuilding	36	38.89	30.56	30.56	13.89	36.11
Tramway & Omnibus	37	51.35	18.92	29.73	10.81	37.84
Industrial & Commercial	109	45.87	21.10	33.03	9.17	39.45
Iron, Coal & Steel	40	47.50	17.50	35.00	7.50	40.00
Railways	53	9.43	1.89	88.68	3.77	90.57
Mines	11	45.45	27.27	27.27	0.00	27.27
Total	716	34.78	22.21	43.02	22.77	52.23

Source: see text.

Notes: An example of a voting scale which was one vote per multiple shares is as follows: 5 shares = 1 vote; 10 shares = 2 votes; 15 shares = 3 votes etc.. By graduated voting schemes, we mean voting scales such as the following 5-10 shares = 1 vote; 10-25 = 2 votes; 25-50 shares = 3 votes; 50-100 shares = 4 votes etc.. A cap on votes simply means that there is a limit on the number of votes no matter how much stock a person owns. For example, the Wilts and Dorset Bank placed a cap on votes of 5. In other words, no shareholder was entitled to more than 5 votes even if they owned 90 per cent of the stock.

Table 3. *Shareholder voting rights and firm characteristics: correlation coefficients*

	One Vote per Share	One Vote per Multiple Shares	Graduated Voting	Cap on votes	Graduated Voting or Cap on votes
Age	-0.227*	0.056	0.170*	0.219*	0.173*
Size	-0.143*	0.003	0.135*	0.213*	0.169*
Uncalled capital	-0.159*	0.001	0.156*	0.256*	0.167*
Traded Locally	-0.032	0.028	0.008	0.074	0.056

Notes: * Significant at 5% level.

Table 4. *Boards of directors (1883)*

Variable	Mean	Standard deviation	Max	Min	N
No. of Directors	7.55	4.21	44.00	2.00	795
No. of Directors / Total Par Value (£000s)	0.08	0.18	3.65	0.00	780
Ruling Class Directors	0.79	1.31	9.00	0.00	794
Ruling Class Directors / No. of Directors (%)	9.47	15.21	100.00	0.00	794
Individual Directors' Qualification	£687	£949	£12,500	£0	791
Individual Directors' Qualification / Total Par Value (%.)	0.39	0.63	6.67	0.00	779
Total Directors' Qualification	£5,307	£8,416	£100,000	£0	788
Total Directors' Qualification / Total Par Value (%)	2.53	3.96	50.00	0.00	776

Source: see text.

Table 5. *Boards of directors and firm characteristics: correlation coefficients*

	No. of Directors	No. of Ruling Class Directors	Ruling Class Directors / No. of Directors (%)	Individual Directors' Qualification / Total Par Value (%)	Total Directors' Qualification / Total Par Value (%)
Age	0.360*	0.148*	-0.014	-0.119*	-0.051
Size	0.432*	0.349*	0.196*	-0.231*	-0.165*
Traded Locally	-0.013	-0.254*	-0.271*	0.027	0.029

Notes: * Significant at 5% level.

Table 6. *Boards of directors: industry averages (1883)*

	No. of Directors	No. Directors / Total Par Value (£'000s)	No. of Ruling Class Directors	No. Ruling Class / No. of Directors (%)	Individual Directors' Qualifications / Total Par Value (%)	Total Directors' Qualification / Total Par Value (%)	N[1]
Banks	7.63	0.04	0.63	7.00	0.41	2.57	157
Canals	8.67	0.05	0.56	5.27	0.24	1.78	9
Docks	16.44	0.02	1.67	15.47	0.19	1.73	9
Gas & Waterworks	7.48	0.06	0.44	5.30	0.33	2.36	64
Industrial & Commercial	5.61	0.07	0.30	5.00	0.46	2.61	122
Insurance	12.55	0.19	1.53	11.00	0.36	3.82	100
Iron, Coal & Steel	5.80	0.03	0.30	4.80	0.57	3.10	44
Land & Building	6.32	0.08	0.87	12.52	0.47	2.51	31
Land Mortgage & Financial	6.18	0.10	1.24	19.69	0.39	2.04	51
Mines	5.33	0.43	0.33	6.94	0.47	2.06	12
Railways	9.40	0.02	1.86	19.21	0.16	1.20	57
Spinning & Weaving	6.38	0.08	0.13	6.25	0.47	2.75	8
Steamships & Shipbuilding	6.86	0.06	0.36	5.55	0.72	4.35	36
Tea & Coffee	4.65	0.05	0.18	3.92	0.55	2.66	17
Telegraph	6.85	0.03	2.30	33.13	0.16	1.12	20
Tramway & Omnibus	4.64	0.04	0.36	10.07	0.19	0.87	39
Wagon & Railway Carriage	5.37	0.10	0.16	2.68	0.36	1.83	19

Source: see text.
Notes: [1] In a small number of cases, missing information means that N is slightly less than the reported figure.

Table 7. *Company dividends: industry averages*

Industry	Dividend / Par (%) in 1883			Average Dividend / Par (%) for 1880-82			Average Dividend / Par (%) for 1873-82			Coefficient of Variation of Dividend / Par (%) 1873-1882	Dividend Payout Ratio (%)		
	N	Mean	Median	N	Mean	Median	N	Mean	Median		N	Mean	Median
Banks	157	11.6	11.0	141	10.9	10.0	115	12.3	11.7	22.7	126	88.4	93.0
Canals	17	5.7	4.5	15	5.5	4.5	11	6.0	4.8	15.5	.	.	.
Docks	9	4.1	4.3	6	4.6	4.1	6	4.3	4.3	28.4	.	.	.
Gas & Waterworks	67	7.8	9.0	51	8.2	8.0	28	7.8	8.0	24.2	22	69.7	61.8
Industrial & Commercial	113	6.1	5.0	63	6.5	6.0	27	7.5	7.1	62.1	72	68.8	68.7
Insurance	93	10.9	7.5	67	13.0	10.8	54	12.2	10.9	33.7	61	62.9	39.6
Iron, Coal & Steel	44	3.9	1.9	27	3.8	3.7	11	4.8	5.5	102.3	.	.	.
Land & Building	27	7.4	5.0	9	5.7	5.0	4	3.7	3.9	70.0	13	69.8	88.4
Land Mortgage & Financial	49	8.6	8.0	28	10.1	9.7	0	.	.	35.8	37	70.8	73.1
Mines	18	0.9	0.0	8	0.0	0.0	3	0.0	0.0	236.6	.	.	.
Railways	56	2.9	3.4	27	2.6	2.1	19	3.0	2.6	52.7	33	96.6	99.9
Spinning & Weaving	8	9.2	9.8	2	10.4	10.4	0	.	.	58.1	.	.	.
Steamships & Shipbuilding	36	5.5	6.0	24	5.4	6.0	14	6.1	6.2	56.1	19	64.9	69.6
Tea & Coffee	16	2.5	0.0	13	2.6	0.7	5	3.3	2.9	87.3	9	44.7	0.0
Telegraph	19	4.9	5.0	12	5.3	4.5	5	7.7	5.3	46.0	12	77.5	85.7
Tramway & Omnibus	38	4.2	4.4	25	5.1	5.3	5	6.9	7.8	49.7	20	46.5	52.7
Wagon & Railway Carriage	19	4.5	5.0	15	4.0	4.7	6	7.8	7.6	63.2	.	.	.
Total	786	7.4	6.0	533	8.0	6.9	313	9.4	8.1	43.9	424	74.7	84.2

Source: see text.

Table 8. *Dividend payout ratio regressions*

	(1)	(2)	(3)	(4)	(5)	(6)
Growth	-0.070	-0.053	-0.057	-0.047		
	(0.045)	(0.044)	(0.053)	(0.054)		
Age			0.000	0.002	0.000	0.001
			(0.002)	(0.002)	(0.001)	(0.001)
Size			0.111***	0.095***	0.119***	0.099***
			(0.021)	(0.026)	(0.015)	(0.018)
Industry Dummies	NO	YES	NO	YES	NO	YES
Constant	0.732***	0.714***	-0.666***	-0.769***	-0.771***	-0.462**
	(0.036)	(0.148)	(0.247)	(0.289)	(0.187)	(0.229)
Observations	212	212	186	186	375	375
R^2	0.010	0.081	0.161	0.197	0.182	0.208

Note: Robust standard errors in parentheses. * significant at 10 percent level; ** significant at 5 per cent level; *** significant at 1 per cent level.

Table 9. *Corporate value regressions using dividend payout ratio (all industries in 1883)*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Dividend Payout Ratio			0.184***	0.117**	0.045	0.192***	0.082**	0.100	-0.025	0.092*	-0.011	0.107*	-0.012
			(0.054)	(0.046)	(0.052)	(0.055)	(0.040)	(0.070)	(0.054)	(0.049)	(0.055)	(0.056)	(0.054)
Dividend coef. of var					-0.312***		-0.089**		-0.130***		-0.133***		-0.132***
					(0.041)		(0.035)		(0.047)		(0.042)		(0.047)
Profit						0.016	-0.040		-0.127		-0.059		-0.078
						(0.012)	(0.091)		(0.099)		(0.095)		(0.084)
Growth								0.006	0.004		0.021		0.009
								(0.026)	(0.016)		(0.016)		(0.016)
Age	0.000	-0.000		-0.000			-0.000		-0.001	-0.000	-0.000	-0.000	-0.001
	(0.001)	(0.001)		(0.001)			(0.001)		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Size	0.186***	0.190***		0.174***			0.151***		0.224***	0.175***	0.214***	0.175***	0.222***
	(0.014)	(0.016)		(0.018)			(0.017)		(0.031)	(0.018)	(0.029)	(0.018)	(0.029)
Traded Locally	0.079***	0.084***		0.074***			0.055**		0.040	0.070***	0.042	0.026	-0.061
	(0.026)	(0.026)		(0.026)			(0.025)		(0.053)	(0.026)	(0.055)	(0.082)	(0.098)
Traded Locally*Dividend Payout Ratio												0.031	0.015
												(0.090)	(0.111)
Traded Locally*Board size												0.424	1.077*
												(0.595)	(0.642)
Board Size	1.840***	1.496***		1.385***			1.166***		1.404***	1.802***	1.572***	1.221***	0.895***
	(0.343)	(0.351)		(0.353)			(0.362)		(0.475)	(0.348)	(0.494)	(0.352)	(0.330)
Ruling Class Directors	-0.102	-0.142		-0.199**			-0.272***		-0.275**	-0.131	-0.268**	-0.189**	-0.279**
	(0.082)	(0.088)		(0.094)			(0.087)		(0.126)	(0.090)	(0.116)	(0.095)	(0.126)
Directorial Qualifications	6.955***	8.636***		7.709***			7.441***		16.590***	5.623***	13.089**	7.859***	17.118***
	(1.604)	(1.775)		(1.680)			(1.963)		(5.768)	(1.390)	(5.143)	(1.696)	(5.901)
Uncalled Capital	-0.002***	-0.002***		-0.002***			-0.002***		-0.002*	-0.002**	-0.002**	-0.002***	-0.001**
	(0.001)	(0.001)		(0.001)			(0.001)		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Cap on Votes	-0.021	-0.022		-0.024			-0.013		0.005	-0.025	0.041	-0.028	-0.001
	(0.025)	(0.023)		(0.024)			(0.022)		(0.051)	(0.027)	(0.057)	(0.025)	(0.052)
Market Power										-0.047	-0.119**		
										(0.043)	(0.059)		
Founders	0.056	0.077**		0.070*			0.057		0.027	0.034	0.046	0.076*	0.011
	(0.036)	(0.036)		(0.037)			(0.052)		(0.086)	(0.028)	(0.054)	(0.041)	(0.090)
Constant	-1.392***	-1.451***	0.883***	-1.313***	1.106***	0.875***	-0.956***	0.922***	-1.754***	-1.300***	-1.563***	-1.314***	-1.688***
	(0.180)	(0.214)	(0.042)	(0.217)	(0.044)	(0.043)	(0.213)	(0.056)	(0.377)	(0.209)	(0.341)	(0.215)	(0.367)
Industry Dummies	NO	YES	NO	YES	NO	NO	YES	NO	YES	NO	NO	YES	YES
Observations	336	336	418	310	358	417	274	212	124	310	124	310	124
R-squared	0.477	0.525	0.055	0.534	0.183	0.059	0.596	0.014	0.663	0.479	0.621	0.537	0.677

Note: Robust standard errors in parentheses. * significant at 10 percent level; ** significant at 5 per cent level; *** significant at 1 per cent level.

Table 10. *Corporate value regressions using dividend payout ratio (banks and railways in 1883)*

	(1)	(2)	(3)	(4)	(5)	(6)
Dividend Payout Ratio			0.302***	0.198***		
			(0.082)	(0.069)		
Average Payout Ratio (1873 & 83)					0.507***	0.279**
					(0.114)	(0.117)
Dividend coef. of var				-0.013		-0.030
				(0.040)		(0.047)
Age	-0.000	-0.000		-0.000		-0.000
	(0.000)	(0.000)		(0.000)		(0.000)
Size	0.106***	0.104***		0.089***		0.090***
	(0.012)	(0.010)		(0.014)		(0.016)
Traded Locally	0.043*	0.041**		0.021		0.026
	(0.022)	(0.020)		(0.021)		(0.030)
Board Size	1.813***	1.769***		1.439***		1.926
	(0.669)	(0.581)		(0.518)		(1.296)
Ruling Class Directors	-0.215***	-0.119		-0.150		-0.144
	(0.076)	(0.090)		(0.095)		(0.117)
Directorial Qualifications	2.450	1.100		0.758		0.315
	(1.811)	(1.378)		(1.106)		(1.234)
Cap on Votes	0.003	-0.031*		-0.031*		-0.039*
	(0.020)	(0.016)		(0.019)		(0.022)
Railways		-0.111***		-0.082		-0.058
		(0.037)		(0.069)		(0.075)
Constant	-0.381**	-0.308**	0.815***	-0.263	0.677***	-0.333
	(0.174)	(0.144)	(0.070)	(0.178)	(0.095)	(0.226)
Observations	152	152	149	109	101	76
R-squared	0.507	0.563	0.055	0.478	0.178	0.520

Note: Robust standard errors in parentheses. * significant at 10 percent level; ** significant at 5 per cent level; *** significant at 1 per cent level.

Table 11. *Corporate value regressions using average dividend / par ratio (1880-82)*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dividends (1880-1882)			0.027***	0.016***	0.019***	0.026***	0.015***	0.038***	0.016*	0.020***	0.023***
			(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.008)	(0.004)	(0.008)
Dividend coef. of var					-0.200***		-0.081		-0.110		-0.098
					(0.055)		(0.052)		(0.071)		(0.071)
Profit						0.001	-0.124**		-0.137		-0.105
						(0.002)	(0.058)		(0.083)		(0.073)
Growth								0.088**	0.025		0.032*
								(0.042)	(0.019)		(0.018)
Age	0.000	-0.000		-0.000			0.000		-0.001	0.000	-0.001
	(0.001)	(0.001)		(0.001)			(0.001)		(0.001)	(0.001)	(0.001)
Size	0.186***	0.190***		0.134***			0.123***		0.181***	0.130***	0.174***
	(0.014)	(0.017)		(0.019)			(0.019)		(0.036)	(0.019)	(0.036)
Traded Locally	0.078***	0.083***		0.050**			0.036		0.044	0.097	0.067
	(0.026)	(0.025)		(0.025)			(0.026)		(0.059)	(0.062)	(0.109)
Traded Locally*Dividends (1880-82)										-0.009*	-0.013
										(0.005)	(0.008)
Traded Locally*Board size										0.681	1.189*
										(0.519)	(0.668)
Board Size	1.843***	1.502***		1.033***			1.049***		1.229***	0.798***	0.667*
	(0.343)	(0.351)		(0.303)			(0.298)		(0.432)	(0.288)	(0.340)
Ruling Class Directors	-0.102	-0.140		-0.153			-0.205*		-0.254	-0.101	-0.185
	(0.082)	(0.088)		(0.120)			(0.121)		(0.180)	(0.124)	(0.173)
Directorial Qualifications	6.931***	8.591***		7.544***			7.185***		14.734*	7.727***	17.376**
	(1.598)	(1.766)		(1.990)			(2.084)		(8.156)	(2.153)	(7.682)
Uncalled Capital	-0.002***	-0.002***		-0.002***			-0.002***		-0.001	-0.002***	-0.001
	(0.001)	(0.001)		(0.001)			(0.001)		(0.001)	(0.001)	(0.001)
Cap on Votes	-0.020	-0.021		-0.001			-0.004		0.018	-0.005	0.033
	(0.025)	(0.023)		(0.022)			(0.022)		(0.056)	(0.022)	(0.058)
Constant	-1.391***	-1.449***	0.801***	-0.841***	0.943***	0.806***	-0.639***	0.689***	-1.314***	-0.828***	-1.244***
	(0.180)	(0.214)	(0.035)	(0.236)	(0.047)	(0.037)	(0.236)	(0.048)	(0.419)	(0.234)	(0.421)
Industry Dummies	NO	YES	NO	YES	NO	NO	YES	NO	YES	YES	YES
Observations	336	336	333	256	325	301	231	150	102	256	102
R-squared	0.476	0.525	0.283	0.614	0.306	0.278	0.618	0.367	0.679	0.627	0.705

Note: Robust standard errors in parentheses. * significant at 10 percent level; ** significant at 5 per cent level; *** significant at 1 per cent level.

Table 12. *Corporate value regressions using average dividend / par ratio (1873-82)*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dividends (1873-1882)			0.025***	0.016***	0.018***	0.024***	0.016***	0.034***	0.024	0.018***	0.039***
			(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.016)	(0.004)	(0.013)
Dividend coef. of var					-0.206***		-0.087		-0.297		-0.263
					(0.070)		(0.090)		(0.175)		(0.179)
Profit						0.000	-0.167**		-0.195*		-0.154
						(0.002)	(0.073)		(0.108)		(0.102)
Growth								0.005	-0.019		0.073
								(0.068)	(0.087)		(0.106)
Age	0.000	-0.000		-0.001			-0.001		-0.004*	-0.001	-0.004**
	(0.001)	(0.001)		(0.001)			(0.001)		(0.002)	(0.001)	(0.002)
Size	0.186***	0.190***		0.098***			0.103***		0.098	0.103***	0.096
	(0.014)	(0.017)		(0.021)			(0.022)		(0.079)	(0.023)	(0.069)
Traded Locally	0.078***	0.083***		0.013			0.014		-0.012	0.015	-0.050
	(0.026)	(0.025)		(0.029)			(0.031)		(0.116)	(0.091)	(0.216)
Traded Locally*Dividends (1873-82)										-0.004	-0.020*
										(0.006)	(0.011)
Traded Locally*Board size										0.876	2.245*
										(0.929)	(1.146)
Board Size	1.843***	1.502***		0.652*			0.980**		0.985	0.574*	0.542
	(0.343)	(0.351)		(0.388)			(0.476)		(0.921)	(0.315)	(0.491)
Ruling Class Directors	-0.102	-0.140		-0.124			-0.155		-0.102	-0.097	0.048
	(0.082)	(0.088)		(0.151)			(0.177)		(0.370)	(0.155)	(0.340)
Directorial Qualifications	6.931***	8.591***		5.250**			5.124**		5.147	5.672*	8.799
	(1.598)	(1.766)		(2.591)			(2.551)		(17.020)	(2.933)	(16.071)
Uncalled Capital	-0.002***	-0.002***		-0.001**			-0.002**		-0.002	-0.001***	-0.002
	(0.001)	(0.001)		(0.001)			(0.001)		(0.001)	(0.000)	(0.001)
Cap on Votes	-0.020	-0.021		0.017			0.011		0.169	0.009	0.175
	(0.025)	(0.023)		(0.026)			(0.030)		(0.151)	(0.028)	(0.161)
Constant	-1.391***	-1.449***	0.821***	-0.338	0.958***	0.844***	-0.349	0.780***	-0.107	-0.427	-0.083
	(0.180)	(0.214)	(0.039)	(0.263)	(0.051)	(0.043)	(0.278)	(0.063)	(1.065)	(0.281)	(0.927)
Industry Dummies	NO	YES	NO	YES	NO	NO	YES	NO	YES	YES	YES
Observations	336	336	217	157	212	193	141	81	48	157	48
R-squared	0.476	0.525	0.254	0.619	0.268	0.227	0.636	0.280	0.699	0.633	0.783

Note: Robust standard errors in parentheses. * significant at 10 percent level; ** significant at 5 per cent level; *** significant at 1 per cent level.

Table 13. *Seasoned issues on the capital market (1883-93) regressions*

	(1)	(2)	(3)	(4)	(5)	(6)
Dividends (1883)	0.013***	0.019**	0.020*			
	(0.004)	(0.008)	(0.010)			
Dividend Payout Ratio				-0.030	0.041	0.004
				(0.079)	(0.100)	(0.130)
Growth		0.219*	0.169		0.269*	0.208
		(0.120)	(0.120)		(0.140)	(0.160)
Age			-0.002*			-0.001
			(0.001)			(0.002)
Size			0.010			0.064**
			(0.028)			(0.031)
Constant	0.059	-0.037	-0.327	0.213***	0.081	-0.802**
	(0.037)	(0.050)	(0.325)	(0.074)	(0.098)	(0.352)
Industry Dummies	NO	NO	YES	NO	NO	YES
Observations	487	219	206	306	157	146
R-squared	0.025	0.116	0.190	0.001	0.099	0.156

Note: Robust standard errors in parentheses. * significant at 10 percent level; ** significant at 5 per cent level; *** significant at 1 per cent level.

Appendix Table 1. Variable definitions for regressions

Variable	Description	Data source
Age	Age of firm	*BOI*
Average Payout Ratio	Average percentage of distributable profits paid out as a dividend for banks and railways in 1873 and 1883	*The Bankers' Magazine*; *The Economist*; *Bradshaw's Railway Manual*
Board Size	Number of directors scaled by total paid-up (par) value in £000s	*BOI* for number of directors and *IMM* for par value
Cap on Votes	Dummy equals 1 if voting is capped, 0 otherwise	*BOI*
Directorial Qualifications	Shareholding requirement for individual directors scaled by total paid-up (par) value (%)	*BOI* for shareholding requirement and *IMM* for par value
Dividends (1873-82)	Average dividend paid as a percentage of paid-up (par) value of an individual stock for period 1873-82	*IMM*
Dividends (1880-82)	Average dividend paid as a percentage of paid-up (par) value of an individual stock for period 1880-82	*IMM*
Dividends (1883)	Dividend paid in 1883 as a percentage of paid-up (par) value of an individual stock	*IMM*
Dividend coef. of var.	Coefficient of variation of dividend par ratio from 1873-82 or since firm began if it is less than 10 years old	*IMM*
Dividend Payout Ratio	Percentage of distributable profits paid out as a dividend	Bradshaw's collection of company accounts at the Guildhall Library. For banks and railways - *The Bankers' Magazine*; *The Economist*; *Bradshaw's Railway Manual*
Founders	Dummy equals 1 if company has founders or deferred shares, 0 otherwise	*BOI*
Growth	Growth in total revenue between 1881 and 1885	Bradshaw's collection of company accounts at the Guildhall Library.
Market Power	Dummy equals 1 if company is an industry which has market power (i.e. railways and utility companies)	*BOI*
New security issue	% increase in paid-up capital of all equity and debt issued between 1883 and 1893	*IMM*
Profit	Profit in 1883 as a % of par value	Par value from *IMM*. Profits from Bradshaw's collection of company accounts at the Guildhall Library, *The Bankers' Magazine*; *The Economist*; *Bradshaw's Railway Manual*.
Railways	Dummy equals 1 if in Railway Industry, 0 otherwise	*BOI*
Ruling class directors	Number of aristocrats or MPs on board of directors scaled by size of board of directors	*BOI*
Size	Natural log of company market capitalization	*IMM*
Tobin's Q	Market value of assets / book value of total assets, where market value of assets = book value of assets + market value of all equity and debt securities – book value of all debt and equity securities	Market value of securities and book value of securities – *IMM*. Book value of total assets - Bradshaw's collection of company accounts at the Guildhall Library, *The Bankers' Magazine*; *The Economist*; *Bradshaw's Railway Manual*.
Traded locally	Dummy equals 1 if Head Office is in the same city as a market in which stock is traded excluding London, 0 otherwise	Head Office – *BOI* Where stock traded – *IMM*
Uncalled capital	Amount of capital that a shareholder is still liable for – it is the difference between subscribed nominal and paid-up capital per share	*IMM*

Note: *BOI = Burdett's Official Intelligence*; *IMM = Investors' Monthly Manual*. Par value was the term commonly used at this time for the paid-up capital of a share.